

CLAIMS

1. A cold spray apparatus comprising:

- 5 a gas controller for controlling gas supply amount of main gas and residual gas
(gas that is not supplied as the main gas);
a gas heater for heating the main gas supplied under the control of the gas
controller;
a powder feeder for receiving the residual gas under the control of the gas
controller and supplying a coating powder together with the residual gas;
10 a powder preheating device for preheating the coating powder supplied from the
powder feeder;
a mixing chamber for mixing the heated main gas with the preheated coating
powder;
a temperature controller for adjusting temperature by controlling the powder
15 preheating device and the gas heater; and
a nozzle for spraying the coating powder mixed in the mixing chamber.

2. The cold spray apparatus of claim 1, wherein the powder preheating device
includes:

- 20 a housing;
a heater mounted on the housing to perform resistance heating; and
a powder transfer pipe formed within the housing in a screw shape in order for
fluid communication between the powder feeder and the mixing chamber, the powder
transfer pipe transferring the coating powder.

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3. The cold spray apparatus of claim 1, wherein the powder transfer pipe is made
of stainless steel.